

and fully feathered tarsus with webs on the feet. Regarding the lesser frigate bird, 'female is the only frigate bird with white underparts and whitish throat', according to Alexander 1995; HANDBOOK Vol. 1, pp. 48. The bird is also suspected to be immature as the head and hind neck are white.

The first bird was recorded from Quilon in 1928 and this the second one from the Sálím Ali Bird Sanctuary, in 1998. This is the only female and immature specimen available in the Subcontinent now as per published records. The bird died after a day. When it was cut open its stomach was empty, and the ovary granular and ill developed. The stuffed specimen is displayed at the interpretation centre of the Sálím Ali Bird Sanctuary Museum.

Live measurements of the bird are as follows:

Wing	— 560 mm
Wing span	— 1,700 mm (57")
Bill (from feathers)	— 80 mm
Tarsus	— 25 mm
Middle toe	— 60 mm
Tail	— 125 mm (Inner) 228 mm (Outer)
Weight	— 680 gm

July 31, 1998

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7. PURPLE HERON *ARDEA PURPUREA* (LINN.) (ARDEIDAE) NESTING ON WATER HYACINTH *EICHHORNIA CRASSIPES* (PONTEDERIACEAE)

On April 29, 1997, we saw four nests of the purple heron *Ardea purpurea* on thick mats of water hyacinth *Eichhornia crassipes* on Kanajari village pond, 10 km northwest of Anand (22° 32' N, 73° 00' E) in Kheda district, Gujarat. The four nests were 10-15 m apart and far away from some *Acacia* trees emerging from the tank. The nest material contained water hyacinth and dry thorny twigs. Initially we thought that somewhat grown young ones were standing on the water hyacinth, but soon realized that they were nestlings in their nest, when we saw adult birds arriving, with greeting calls, and feeding the young. There were 2 young ones in two nests and one in the 3rd nest, all 5 weeks of age. The fourth nest was in the incubation stage. Considering the age of the young, and the known incubation period i.e. 26 days (Hancock and Kushlan 1984), it can be presumed that the clutches were initiated in the first or second week of February. The heronry initiated on the *Acacia nilotica* trees standing within the pond

had two nests of purple heron in the nest building stage, and one in the early incubation stage. On the same date, other colonial water birds in the heronry were little egrets (9), large egrets (10), little cormorants (12) and white ibises (8). Foraging cattle egrets (15) were seen in breeding plumage, but they had not initiated nest building.

The nest of the purple heron is usually made of *Phragmites* or *Typha* stems and built on a flattened site in dense reed beds, rushes or papyrus (Hancock and Kushlan 1984). Twig nests are also built in thickets in Asia (Ali and Ripley 1983, Hancock and Kushlan 1984). Hence, nesting on water hyacinth is a new record. Water hyacinth always floats on the water surface and hence the nest is safe against an increase in water level. The nests on *Phragmites* or *Typha* do not offer such safety. This observation indicates a prolonged breeding season (February to September or October) at a given site, with the probability of double nesting.

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8. PALLAS'S FISHING EAGLE *HALIAEETUS LEUCORYPHUS* (PALLAS)
PIRATES FISH FROM AN OTTER *LUTRA LUTRA* (LINN.)

I observed four common otters (*Lutra lutra*) on boulders in the middle of the River Manas. The otters were fishing; they would come out of the water with the fish and feed while sitting on the boulder. A Pallas's fishing eagle was noticed circling above the otters, repeatedly trying to snatch the fish. It made two or three futile attempts by diving at the otter. After a while, the bird made another attempt. This time, the otter was frightened and dropped the fish, which was neatly picked up by the eagle in one swoop. The Pallas's fishing eagle is regularly known to pirate fish from other fish eating birds, or smaller eagles, but very few have been recorded robbing otters or other mammals

(Prakash 1989).

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October 8, 1998 BIBHUTI PRASAD LAHKAR

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9. GROUP SIZE AND VIGILANCE IN INDIAN PEA FOWL
PAVO CRISTATUS (LINN.), FAMILY: PHASIANIDAE

Flocking in birds is considered to be an adaptive social strategy against danger, and the evolution of gregariousness is an effective solution to the problem of the individual's vigilance load (Dimond and Lazarus 1974). Birds

feeding in large flocks are safer (in terms of number of birds alert at any moment) and have more time to feed (in terms of the proportion of its time that an individual spends alert). It is known that the time budget of a species is related



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